4. (New) The method for joining a door sash with frame members of door components according to claim 3, wherein the bent end part of said door sash does not contact the part of the frame members fitted in said mold.

5. (New) The method for joining a door sash with frame members of door components according to claim 3, wherein said door sash, and said frame members are made of aluminum alloy.

6. (New) The method for joining a door sash with frame members of door components according to claim 4, wherein said door sash and said frame members are made of aluminum alloy.

7. (New) A method for joining a door sash with frame members of door components, said method comprising the steps of:

fitting a part of each of said frame members into a mold;

forming a bent end part at an end part of said door sash;

fitting the bent end part of said door sash into said mold;

pouring a molten metal into said mold and wrapping up the part of the frame members and the bent end part of said door sash, which are fitted in said mold;

solidifying said molten metal in said mold; and

removing said mold, leaving a cast joining member by which the bent end part of said door sash and each of the frame members are joined together.

8. (New) The method for joining a door sash with frame members of door components according to claim 7, wherein the bent end part of said door sash does not contact the part of the frame members fitted in said mold.

9. (New) The method for joining a door sash with frame members of door components according to claim 7, wherein said door sash and said frame members are made of aluminum alloy.

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10. (New) The method for joining a door sash with frame members of door components according to claim 8, wherein said door sash and said frame members are made of aluminum alloy.

REMARKS

The Office Action dated October 28, 2002 has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto. By this Amendment, claim 2 is canceled. Claims 3-10 are newly added. No new matter has been entered. Accordingly, claims 3-10 are pending in this application and are submitted for consideration.

Claim 2 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 2 has been canceled. Therefore, this rejection is moot.

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' admitted prior art (AAPA) in view of Ruehl et al. (U.S. Patent No. 6,216,763, "Ruehl") or Leith (U.S. Patent No. 6,173,628).

Claim 2 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruehl. In making this rejection, the Office Action took the position that if the members of Ruehl are considered to be frame members, then it would be obvious to use the technique of Ruehl to join the frame members made of any metal, including an aluminum alloy. By this Amendment, claim 2 has been canceled. Therefore, the rejections are moot.

Newly-added independent claim 3 recites a method for joining a door sash with frame members of door components. The method includes the steps of: fitting a part of each of the frame members into a mold; forming a bent end part at the end part of the door sash; fitting the bent end part of the door sash into said mold; and wrapping up the part of the frame members and the bent end part of the door sash in cast metal.

In the present invention, the door sash has a bent end part formed at the end part of the door sash. A part of each of the frame members and the bent end part are wrapped up in cast metal, as recited in claims 3 and 7. Thus, when the sash is pulled sidewardly after wrapping up in cast metal, since the bent end part disturbs the pop-out of the frame members from the cast metal, the joint rigidity of the joining member is high.

Secondly, in the present invention, each of the frame members is made of aluminum alloy, as recited in claims 5 and 9. Since aluminum alloy is easily deformed by heat, the part of the frame members fitted in said mold in cast metal might be deformed. Thus, the pop-out of the bent part of the door sash from the cast metal will be disturbed by the other deformed frame members. If another metal material is used instead of aluminum alloy, the deformation of the metal material does not always arise because deformational characteristics of another metal material differ from aluminum alloy.

Therefore, it is respectfully submitted that the newly-added independent claims 3 and 7 are also patentable over the applied references.

Further, as claims 4-6 depend directly or directly from claim 3 and claims 8-10 depend directly or indirectly from claim 7, Applicants respectfully submit that each of

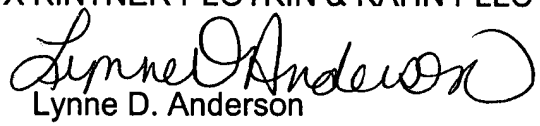
these claims incorporate the patentable aspects thereof, and are therefore allowable for at least the same reasons as discussed above with respect to the independent claims.

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 3-10, and the prompt issuance of a Notice of Allowability are respectfully solicited.

If this application is not in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 106145-00021.**

Respectfully submitted,
ARENT FOX KINTNER PLOTKIN & KAHN PLLC



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Enclosures: Request for Continued Examination
Petition for Extension of Time (two months)